

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
MISSOULA DIVISION

TAMARA DOWNEN, Individually and
as Personal Representative for the
ESTATE OF STANLEY L. DOWNEN,
Deceased,

Plaintiffs,

vs.

MONTANA VETERANS' HOME;
STATE OF MONTANA
DEPARTMENT OF PUBLIC HEALTH
AND HUMAN SERVICES; CITY OF
COLUMBIA FALLS; MIKE JOHNSON
and DAVID G. PERRY,

Defendants.

Cause No. CV-13-121-M-DWM

MONTANA VETERANS' HOME AND
STATE OF MONTANA
DEPARTMENT OF PUBLIC HEALTH
AND HUMAN SERVICES PROPOSED
FINDINGS OF FACT

COMES NOW, Defendant Montana Veterans' Home and the State of
Montana Department of Public Health and Human Services (collectively referred
to as "the State" or "Montana Veterans' Home"), by and through its counsel,
submit the following proposed findings of fact as required by the Court's January
17, 2014, Order (Doc. 58.)

THE STATE'S PROPOSED FINDINGS
OF FACT

The Court held a *Daubert* hearing in this matter on January 29, 2014.

Dr. Walter Peschel

1. Dr. Peschel intends to testify at trial that Stanley Downen's advanced Alzheimer's disease compromised his ability to recover from the tasing event and contributed to or hastened his death.
2. Dr. Peschel's theory regarding Stanley Downen's death is that an application of a taser controlled Conducted Electrical Weapon ("CEW") to Downen's side caused electrical current to travel to his brain, causing electroporation, which accelerated Downen's Alzheimer's progression. This caused or contributed to Stanley Downen's death in that the electroporation in his brain could not be repaired due to his Alzheimer's disease.
3. Electroporation involves the passage of extremely high electrical currents through tissue. The currents are so brief that there is no thermal destruction. The cells in the tissue are damaged by the strong electrical field before the cells can be damaged by "cooking" or overheating. (Doc. 49-1 at 8).
4. Dr. Mark Kroll, Ph.D., FACC, FHRS is a published and qualified researcher in the areas of electrical injury, Taser-CEWs and electroporation. (Doc. 57-1 at 3).

5. Dr. Patrick J. Burns, D.O., is a doctor of osteopathic medicine. (Doc. 62 at 3).
6. Dr. Peschel's curriculum vitae indicates 35 years of general medical practice, obstetrics and pediatrics. (Dr. Peschel CV)
7. Dr. Peschel does not have any professional training related to tasers, CEWs, or taser-related medical treatment.
8. Dr. Peschel does not have any professional experience with tasers, Conducted Electrical Weapons ("CEWs"), or taser-related medical treatment.
9. Dr. Peschel has not conducted any testing regarding the effects of CEWs on human beings or their brain.
10. Dr. Peschel has not authored or contributed to any articles or other literature related to the subjects of CEW or the health effects of CEW.
11. Dr. Peschel has never cared for or treated patients with CEW exposure.
12. Dr. Peschel has not conducted nor participated in any formal research regarding CEW injuries/physical effects.
13. Dr. Peschel has not conducted nor participated in any formal research regarding electroporation.

14. Dr. Peschel is not professionally trained regarding the subject of electroporation.
15. Dr. Peschel has never been recognized by any other court as an expert on the subject of CEW injuries/physical effects or electroporation.
16. Dr. Peschel has never previously been allowed to offer opinions in other courts on the subjects of CEW, CEW injuries/physical effects or electroporation.
17. Dr. Peschel has not identified any professionally recognized literature addressing the effects of electroporation of the brain caused by CEW.
18. Dr. Peschel claims to have been tased in August, 2007, but cannot affirmatively say so, as he was unconscious when he was allegedly tased.
19. The circumstances and symptoms associated with Dr. Peschel's alleged tasing are as follows:
 - A. Dr. Peschel recounts hearing two loud noises, then he lost consciousness. He states that it was difficult to breath when he awakened and he was dazed. Dr. Peschel states that he went to the emergency room where he was diagnosed with acute myocardial infarction.

B. He recounts having syndromes associated with electrocution.

The next day he awoke with tetany, had severe contractions in nearly every muscle in his body, and was in extreme pain.

C. Dr. Peschel states he returned to the hospital after he fainted in a bathtub. He had an increased CPK of over 700, urinary retention, and weakness throughout his entire body. He could not ventilate his lungs properly and his Oxygen stats dropped to the 80's and vital capacity dropped to 40 percent. His median nerves and right radial nerves became weak and he developed stiffness throughout his entire body.

D. Dr. Peschel developed problems with memory, timekeeping, word finding, navigation, mathematics, and intellectual stamina for approximately a year.

20. Dr. Peschel's symptoms are not consistent with being tased based on accepted research and literature:

A. Tasers only emit one loud noise when launching the two probes. Studies confirm that subjects do not lose consciousness when they receive a CEW application and the CEW does not interfere with breathing in humans.

Subjects are not dazed and recover immediately after a CEW exposure. A CEW does not cause myocardial infarction. (Doc. 49-1 at 5-6).

- B. There have been over 3 million field and training CEW exposures, but no athletic-type strain injuries as severe as described by Dr. Peschel have ever been reported. (Doc. 49-1 at 6).
- C. The median increase in CPK with a CEW exposure is 32, which is well under the 700 increase experienced by Dr. Peschel. With over 3 million field and training CEW exposures, there have never been symptoms similar to Dr. Peschel's lung ventilation reported. As previously found, CEW exposure does not interfere with breathing and will not lead to chronic interference with breathing. The CEW exposure is not strong enough to cause nerve damage in Dr. Peschel's arms. Even if it were, each arm would have had to have been struck with a probe, which Dr. Peschel does not claim. If that were the case, electrical current would not have passed throughout his

entire body and caused gradual stiffness throughout his whole body. (Doc. 49-1 at 6-7).

D. Studies confirm that any use of force, including CEW exposures, causes a minor and insignificant dip in cognitive abilities within the first 15 minutes following the force, with complete recovery within 60 minutes. There are no studies to support cognitive disabilities lasting a year. (Doc. 49-1 at 7).

21. Dr. Peschel's alleged symptoms do not correlate with accepted studies and literature on CEW exposure.
22. Plaintiff has failed to establish that the symptoms claimed by Dr. Peschel were caused by CEW Exposure.
23. Plaintiff concedes Dr. Peschel's reported experience of being tased is factually different than the tasing of Mr. Downen. (Doc. 53 at 3).
24. Dr. Peschel's recount of his personal experience with CEW and the symptoms and effects of the alleged CEW exposure is not consistent with the symptoms and effects generally accepted by the scientific community.

25. Dr. Peschel's testimony as to his personal experience being tased is not reliable.
26. The X26 CEW cannot generate sufficient current to cause electroporation damage. (Doc. 49-1 at 9).
27. Scientific studies do not support that electroporation occurs with normal taser usage. (Doc. 62 at 6).
28. Reversible electroporation is only possible within 1 mm of the tip of the CEW probe. (Doc. 49-1 at 9-10).
29. There was no evidence of electroporation in Mr. Downen by way of tissue breakdown, nerve palsy, cardiac dysrhythmia, seizure, lactic acidosis, electrolyte imbalance, or myoglobinuria/rabdomyolysis. (Doc. 62 at 6).
30. The top probe from the X26 CEW landed in Stanley Downen's left biceps and the bottom probe landed in his left hip. The current would have flowed through the biceps, deltoid, infraspinatus, latissimus dorsi, and to the gluteus maximus and medius muscles. No current would have flowed to the brain. (Doc. 49-1 at 10).
31. Current in CEWs flows between the probes and not to outside areas. (Doc. 57-1 at 8).

32. A Taser CEW has its effect by depolarization of the peripheral nerves in the area between the prongs of the CEW. (Doc. 57-1 at 8).
33. The effects of heat damage from the use of a Taser are local to the area of the probes. (Doc. 49-1 at 9-10)
34. Approximately 32,000 probes have been inserted in the neck and above of subjects, with no neurological effects noted from this direct stimulation of the brain. (Doc. 49-1 at 11).
35. There is no evidence that an electrical shock to the brain accelerates the progression of Alzheimer's Disease. (Doc. 49-1 at 11).
36. Electroconvulsive therapy ("ECT") is safe and effective for treating depression in the elderly. ECT is particularly useful for treatment of agitation and aggression in dementia. (Doc. 62 at 7).
37. ECT delivers 50-100 joules of energy. (Doc. 62 at 6).
38. Cardiac defibrillators deliver 150-400 joules of energy. (Doc. 62 at 6).
39. Tasers deliver 0.075 joules of energy. (Doc. 62 at 6).
40. ECT is used as a treatment modality for elderly patients with dementia and delivers 666 to 1,333 more joules of energy than a taser. (Doc. 62 at 6-7).

41. Dr. Peschel's opinion that a connection between a CEW application and an acceleration of Alzheimer's progression is contradicted by scientific literature. (Doc. 49-1 at 11.)
42. Dr. Peschel's theories regarding the connection of electroporation from tasing and the decline in Mr. Downen's health status are not generally accepted by any relevant scientific community. (Doc. 49-1 at 11.)
43. Dr. Peschel's references do not support his theory that the CEW application can cause electroporation. Dr. Peschel relied on the following references (Dr. Peschel Expert Report):
 - A. Baiba Grube and David Heimbach, *Acute and delayed neurological sequelae of electrical injury*, Electrical Trauma: The Pathophysiology, Manifestations and Clinical Management (Cambridge U. Press 1992).
 - B. "Canada: Amnesty International reiterates call to suspend police use of tasers following airport death", Amnesty International Public Statement (April 20, 2007).
 - C. Emma Jenkinson, Claire Neeson, Anthony Bleetman, *The relative risk of police use-of-force options: Evaluating the*

potential for deployment of electronic weaponry, Journal of Clinical Forensic Medicine 13: 229-241 (2006).

- D. Byron Lee, Eric Vittinghoff, et. Al., *Relation of Taser (Electrical Stun Gun) Deployment to Increase in In-Custody Sudden Deaths*, American Journal of Cardiology (March 2009).
- E. *Ventricular Fibrillation after Stun-Gun Discharge*, New England Journal of Medicine 958-959 (Sept. 1, 2005)
- F. *Amnesty International's Continuing Concerns About Taser Use*, Amnesty International (2006).
- G. Gary Vilke, Christian Sloane, et. al., *Physiological Effects of a Conducted Electrical Weapon on Human Subjects*, Annals of Emergency Medicine, vol. 50, no. 5 (Nov. 2007).
- H. Jeffrey Ho, James Miner, et. al., *Cardiovascular and Physiologic Effects of Conducted Electrical Weapon Discharge in Resting Adults*, Academic Emergency Medicine, vol. 13, no. 6 (June 2006)
- I. Raphael Lee, John Aarsvold, Wei Chen, et. al., *Biophysical Mechanisms of Cell Membrane Damage in Electrical Shock*, Seminars in Neurology, vol. 15, no. 4 (Dec. 1995)

J. Dan Longo, Anthony Fauci, et. al., *Harrison's Principles of Internal Medicine*, 18th Ed. (2011).

44. The Grube paper considered very high voltage delivery such as lightning strikes, power line contacts or indoors utility power exposures. The average current from a CEW exposure is approximately 2mA (milliamperes), which is nearly 100 times less than a 120 V utility power. The patients with neurological deficits in the Grube paper lost consciousness, meaning the current either directly affected their brain or it stopped the heart and that had an effect on the brain due to a cardiac arrest. This did not occur with Stanley Downen. (Doc. 57-1 at 3-5)
44. References B and F are Amnesty International fund-raising material and are not peer-reviewed scientific papers. (Doc. 57-1 at 4-5)
45. The Jenkinson paper does not Dr. Peschel's hypothesis and found that the TASER CEW reduced injuries and should be more widely used. (Doc. 57-1 at 4-5)
46. The Byron Lee paper reports that officer-involved shootings increased in the first year after CEW adoption. This is irrelevant as Stanley Downen was not shot with a firearm. (Doc. 57-1 at 4-5)

47. The Kim paper claims that a person's heart was stopped after being shot in the chest with a CEW. This paper has been repeatedly questioned in peer-reviewed literature and is no longer taken seriously. It has no application here because Stanley Downen's heart did not stop. The patient in the Kim paper did not suffer any neurological damage. (Doc. 57-1 at 4-5)
48. References G and H (Vilke and Ho) contradict Dr. Peschel's opinion as they show that there is no deleterious effect of the CEW on the human body. (Doc. 57-1 at 4-5)
49. The Raphael Lee paper explains electroporation, but does not support Dr. Peschel's theory that the CEW application caused electroporation. (Doc. 57-1 at 4-5)
50. The Longo paper is not helpful because it does not reference electrical injuries or electroporation. (Doc. 57-1 at 4-5)
51. None of the papers relied on by Dr. Peschel support key building blocks of his theory, namely:
 - A. Electrical current can take the path of greatest resistance and detour from the side up through the brain. (Doc. 57-1 at 8)

- B. A taser CEW can cause electroporation in tissue beyond the 1 mm distance from the probe. (Doc. 57-1 at 8)
 - C. A CEW exposure anywhere can hasten a death from Alzheimer's. (Doc. 57-1 at 8)
- 52. Dr. Peschel does not produce or identify any medical evidence or bases for his opinion that electroporation occurred within Stanley Downen.
 - 53. Dr. Peschel does not produce or identify any medical evidence that confirms Stanley Downen experienced electroporation in his brain.
 - 54. There is no evidence the CEW caused Stanley Downen to experience electroporation. (Doc. 62 at 7); (Doc. 49-1 at 9-10)
 - 55. Dr. Peschel does not consider any alternate theories for the change in Stanley Downen's behavior other than electroporation.
 - 56. Stanley Downen's laboratory studies were normal. Medical records state that the patient did not appear ill, his body temperature was normal, his oxygen saturations were 95% on room air, and the CAT scan of his head did not reveal hemorrhage or swelling. (Doc. 62 at 9).

57. Dr. Peschel's theories have not been subjected to peer review and publication.
58. Dr. Peschel's theories are not sufficiently tied to the facts of the case to be of use to the jury.
59. Dr. Peschel does not provide medical or scientific support for his theories, they are based on speculation and subjective belief.
60. Dr. Peschel has not routinely treated patients with Alzheimer's or dementia in the last 5 years.
61. Dr. Peschel has never worked as a nurse in a long-term care facility.
62. Dr. Peschel has never worked as a CNA in a long-term care facility.
63. Dr. Peschel has never worked in nursing home administration.
64. Dr. Peschel has not been an instructor of students in an accredited health professional school or accredited residency or clinical research program relating to nursing home standards of care, treatment of Alzheimer's patients, or de-escalation of Alzheimer's patients in the last 5 years.
65. Dr. Peschel is not thoroughly familiar with the standards of care and practice of nursing or staff in a long-term care facility.

66. As a medical director at Royal Manor and Wayside nursing homes, Dr. Peschel was not involved with setting the standard of care of nurses.
67. The standard of care of nurses in a long-term care facility is not substantially similar to the standard of care of a general practice physician.
68. Dr. Peschel is not a licensed nurse or a licensed long-term care administrator.

Paul Coats

69. According to Plaintiff's Expert Disclosure, Paul Coats intends to testify that tasing represents a significant stress on the body, and on the brain in particular, and that such significant levels of stress advance and exacerbate the dementing process. In the absence of underlying dementia, Stanley Downen would likely have been better equipped to recover from the tasing and that his condition compromised his ability to recover.
70. Paul Coats is a nurse practitioner at the Neuroscience and Spine Institute.

71. Paul Coats has no experience, training, or knowledge of how an CEW application affects the body, particularly the brain.
72. Paul Coats has no experience, training, or knowledge of how an CEW application interrelates with dementia or a dementia patient's ability to recover after being subjected to an CEW.
73. Paul Coats' care and treatment of Stanley Downen did not involve determining the potential existence of electrical injuries caused by the CEW.
74. How Stanley Downen would have recovered from being tased if he did not have Alzheimer's or dementia is beyond the care, treatment, and prognosis of Mr. Downen.
75. The affect of an CEW application on an individual's brain and on dementia is beyond Paul Coats' care, treatment, and prognosis of Stanley Downen.
76. The standard of care of the Montana Veterans' Home or its staff is beyond Paul Coats' care, treatment, and prognosis of Stanley Downen.
77. Paul Coats has never authored an expert disclosure in this case.

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Dated this 27th day of January, 2014.

MOORE, COCKRELL,
GOICOECHEA & AXELBERG, P.C.

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CERTIFICATE OF SERVICE

This is to certify that on the date below, the foregoing was duly served on the following by the following means:

1 CM/ECF

_____ Hand Delivery

2, 3 Regular Mail

_____ Overnight Delivery

_____ Facsimile

1 Electronic Mail

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Date: January 27, 2014

